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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,778	09/05/2003	Adolf Stender	64251-022CIP	8988
29492	7590	12/14/2004	EXAMINER	
HUSCH & EPPENBERGER, LLC 401 MAIN STREET SUITE 1400 PEORIA, IL 61602			BISSETT, MELANIE D	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/656,778

Applicant(s)

STENDER ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 9-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
3. Claims 9-11 refer to isocyanate functionalities of the polyol components. However, the reference has not enabled one of ordinary skill in the art to form polyols having *isocyanate* functional groups. Thus, the disclosure also does not teach how to obtain polyols having specified isocyanate functionalities.
4. Claim 12 indicates that the isocyanate index between the first component and second component, both polyols, is a certain value. However, isocyanate index refers to a reaction between an isocyanate and a polyol. The specification is enabling only for the isocyanate index between the isocyanate reactant and the collective polyol reactant (p. 4 lines 14-20) but not for an isocyanate index between the polyol components. Also, claim 12 recites a polyol having a hydroxyl number in the range of 112-600. However, the specification only supports polyols having a hydroxyl number in the range of 112-116.
5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The claims recite that the polyol component should have a certain *isocyanate functionality*. From this recitation, it is unclear whether the applicant intends to claim that the polyols contain isocyanate functional groups or that the functionality of the alcohol groups reactive with the isocyanates is a certain value.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgdörfer et al. in view of Withers. Burgdörfer et al. (US 4,456,642) can be found on the applicant's Form PTO-1449.

10. Burgdörfer discloses polyurethane elastic gels for padding elements comprising a crosslinked polyurethane matrix, a polyhydroxy liquid dispersing agent, and optional fillers or additives (abstract). Since the reference discusses that some of the polymer chains are covalently crosslinked, while others are bonded mechanically, it is the examiner's position that the reference teaches undercured reaction products of polyols

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and polyisocyanates (col. 4 lines 27-39). The dispersing agent is partially bonded to the polyurethane gel matrix while still possessing reactive groups. Polyisocyanates include aliphatic, cycloaliphatic, araliphatic, and aromatic polyisocyanates fitting the applicant's formula (col. 7 lines 15-33). Pure and modified isocyanates, urethanised isocyanates, allophanised isocyanates, and biuretised isocyanates are all taught (col. 7 line 54-col. 8 line 38). Polyols include those having molecular weights of 1000-12,000 having OH numbers between 20 and 112 (col. 3 lines 18-39). The polyurethane is formed at an isocyanate index of 15-60, with the product of isocyanate functionality to polyol functionality of at least 10 (col. 3 lines 27-59).

11. The reference teaches the inclusion of fillers or additives in amounts up to 50% by weight (col. 10 lines 46-48). However, the reference does not specify the use of elastic microspheres. Withers teaches composite elastomeric articles for cushioning purposes, where rubbery solid microspheres are included (abstract). Withers exemplifies the use of polyolefin elastic microspheres under the trademark Dualite M6001AE (col. 6 lines 48-63). They have a mean particle size of 50 microns and consist of expanded polyolefinic polyvinylidene chloride copolymers coated in calcium carbonate. Withers teaches including microspheres to increase "energy return" in elastomeric articles, especially polyurethane sole-forming cushioning materials (col. 7 lines 5-21). Thus, it is the examiner's position that it would have been prima facie obvious to include the elastic microspheres of Withers' invention in any amount necessary to optimize the energy return of the elastomeric cushioning materials of

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Burgdörfer's invention. Such a material would possess the applicant's claimed hardness and elasticity properties.

12. Regarding claim 12, Burgdörfer teaches combinations of polyols (examples) and teaches that polyols should have OH values of 20-112. However, the reference does not appear to exemplify the combination of a polyol having an OH value below 112 with one having an OH value of 112-600. It is the examiner's position that it would have been prima facie obvious to combine a polyol having an OH value below 112 with one having an OH value of 112 in any ratio necessary with the expectancy of forming equally improved polyurethane cushioning gels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melanie D. Bissett  
Patent Examiner  
Art Unit 1711

mdb